

We claim:

Sub B1

1. A fastener for body tissue repair comprising:
a shaft comprising a proximal portion and a distal portion,
said proximal portion having a tapered, curved end configured to arrest the movement of said shaft in the distal direction,
said distal portion having one or more protrusions, wherein said protrusions have proximal surfaces configured to arrest the movement of the shaft in the proximal direction and distal surfaces configured to permit the movement of the shaft in the distal direction.
2. A fastener according to claim 1, wherein a portion of said shaft further comprises one or more longitudinal ridges.
3. A fastener according to claim 2, wherein said protrusions protrude from said one or more longitudinal ridges.
4. The fastener of claim 3, wherein said one or more ridges run the length of said shaft.
5. A fastener according to claim 1 wherein said fastener comprises a bioactive material.

6. The fastener of claim 1, wherein said tapered, curved end further comprises protuberances having proximal surfaces configured to arrest the movement of the shaft in the proximal direction.

7. A method for the repair of a rupture in a meniscus, comprising the steps of:
providing a fastener comprising:

a shaft comprising a proximal portion and a distal portion,

said proximal portion having a tapered, curved end configured to arrest the movement of said shaft in the distal direction,

said distal portion having one or more protrusions, wherein said protrusions have proximal surfaces configured to arrest the movement of the shaft in the proximal direction and distal surfaces configured to permit the movement of the shaft in the distal direction;

aligning said fastener on the surface of the meniscus; and

pushing said fastener into the meniscus until said fastener bridges the rupture and only said curved end of said fastener is positioned on the surface of the meniscus.

8. A method for the repair of a rupture in a meniscus, comprising the steps of:
providing a fastener comprising:

a shaft comprising a proximal portion and a distal portion,

said proximal portion having a tapered, curved end configured to arrest the movement of said shaft in the distal direction,

said distal portion having one or more protrusions, wherein said protrusions have proximal surfaces configured to arrest the movement of the shaft in the proximal direction and distal surfaces configured to permit the movement of the shaft in the distal direction;

aligning the fastener of claim 1 on the surface of the meniscus; and

pushing the fastener into the meniscus until said fastener bridges the rupture and is embedded totally within the meniscus.

9. A method for the fixation of a fibrous implant or tissue transplant on a living tissue comprising the steps of:

aligning the fibrous implant or tissue transplant on the surface of the living tissue; providing a fastener comprising:

a shaft comprising a proximal portion and a distal portion,
said proximal portion having a tapered, curved end configured to hold a portion of said fibrous implant,

said distal portion having one or more protrusions, wherein said protrusions have proximal surfaces configured to arrest the movement of the shaft in the proximal direction and distal surfaces configured to permit the movement of the shaft in the distal direction;

and pushing said fastener through said implant or tissue transplant and into the living tissue until said tapered, curved end contacts said implant or tissue transplant.

10. A method according to claim 9, wherein the fibrous implant or transplant is selected from the group consisting of: synthetic, polymeric mesh or scaffold, collagenous mesh or scaffold, periosteum transplant and connective tissue transplant.

Sub BT 11. A fastener for body tissue repair comprising:
a shaft including a proximal portion and a distal portion;
wherein said proximal portion includes means for arresting said shaft's movement in the distal direction; and
wherein said distal portion includes means for arresting said shaft's movement in the distal direction.

12. The fastener of claim 11, wherein the proximal portion further includes means for arresting said shaft's movement in the proximal direction.